






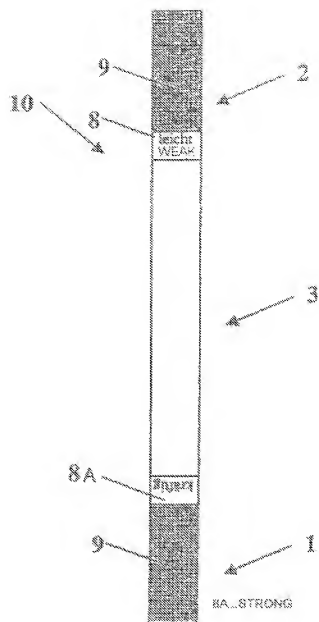


**DOUBLE FILTER CIGARETTE AND METHOD FOR PRODUCTION THEREOF****Publication number:** WO0128368 (A1)**Publication date:** 2001-04-26**Inventor(s):** GRZONKA HORST [DE]; METZNER WOLFGANG [DE]**Applicant(s):** BAT CIGARETTENFAB GMBH [DE]; GRZONKA HORST [DE];  
METZNER WOLFGANG [DE]**Classification:****- International:** **A24D1/00; A24D1/00;** (IPC1-7): A24D1/00**- European:** A24D1/00D**Application number:** WO2000EP08713 20000906**Priority number(s):** DE19991049789 19991015**Also published as:** EP1139801 (A1) EP1139801 (B1) AU7516300 (A)**Cited documents:** DE4414605 (A1) CH405137 (A) BE458179 (A) DE19809865 (C1) DE4435110 (A1)**Abstract of WO 0128368 (A1)**

The invention relates to a filter cigarette comprising a length of tobacco (3) and two filters (1, 2) attached to said length of tobacco. Said filters (1, 2) are detachable from the length of tobacco and exhibit clearly different filter properties. The invention further relates to a filter coating paper (11), for attaching a filter to a length of tobacco, which comprises a strip of coating paper (9) and an attached strip of cigarette paper (8), whereby the strip of cigarette paper forms the linking section between the length of tobacco and the filter. The invention furthermore relates to the use of the inventive filter cigarette in cooperation with a cigarette box comprising opening flaps (4, 6) on both front faces. A method for factory production of said double filter cigarette is also disclosed.



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Doppelfilter Cigarette and method to its production the instant invention concern a Filtercigarette with a tobacco strand and two different filters, which are more releasable by the tobacco strand, in the other one "Doppelfilter Cigarette" mentioned, set to the tobacco strand. Furthermore the invention concerns a filter lining paper for the mounting of a filter at a tobacco strand as well as the use of a Doppelfilter Cigarette according to invention with a Cigarettenstachel. Finally the invention points a method out to the production of such Doppelfilter Cigarette.

Filtercigaretten, which exhibit several filters, are in principle known. Thus for example the DE describes 27 09 777 aluminium a divisible Cigarette with separate-mature, which can be equipped at their ends with two filters. Thereby that consumers short Cigaretten with and without filters is to become offered, in order to avoid that tobacco becomes wasted, if that does not want to smoke consumer a normal prolonged Cigarette whole.

Also from the GB-A 851.324 the production of short Filtercigaretten is known, whereby the two Cigaretten at their central Doppelfilter are connected with one another by means of a separable lining paper, so that from disruption of this lining paper two Filtercigaretten result.

From the GB-A 2.129.274 further a Cigarette with filters at both ends of a tobacco strand is known, which can become in the center or separate at a filter, in order to manufacture two shorter Cigaretten or a prolonged Cigarette.

The DE 82 22 972 U1 a disclosed Cigarette with two filters and two perforations. One of the perforations is in the center of the Cigarette, in order to be able to divide it into two short Cigaretten, while the other perforation is at the interface to a filter, over with separation a prolonged Filtercigarette to obtained. In accordance with this disclosure it is also possible to plan an other perforation before the second filter.

All these above proposals from the state of the art assume disadvantageous-prove that the smoker would like to smoke in each case Cigaretten of a single Geschmacksrichtung or starch. In addition no method becomes the fabrikatorischen, thus mass production of such Doppelfilter Cigarette indicated.

From the DE 44 14 605 A1 a Cigarette is known, which exhibits a tobacco strand surrounded of Cigarettenpapier also at its ends planned filters. In order to smoke the Cigarette individual in their starch, proposed becomes that the filters are different prolonged. With these Cigarette becomes a conventional filter paper for each filter used. Disadvantage here is that after the separation one remains the filter direct at the filter body at the end, at which the Cigarette is to be ignited a filter paper remainder, to that the taste with the Anzündung of the Cigarette affected. In order to exclude this impairment, one would have to separate the filter at a location, where no more lining paper is present, whereby a very irregular or frayed tobacco strand forehead section would develop. In addition here tobacco becomes wasted.

It is therefore an object of the instant invention, a Filtercigarette with two filters, thus a Doppelfilter Cigarette to create which it the smoker allowed to select before the Anrauchen of the Cigarette between two different Geschmacksrichtungen and/or, to smoke alternatively a strong or a light Cigarette, whereby after the separation of a filter and avoided after the Anzündung of the Cigarette at this side a Beeinträchtigung is to become gung the Cigarettenengeschmacks. Also a related suitable filter paper is to become provided.

Further a path is to become according to invention shown, as a consumer in simple manner access to in taste and/or starch knows different Cigaretten obtained, which becomes from a strand with two filters by separations one the filter manual manufactured.

And finally a method is to become the fabrikatorischen production of such Doppelfilter Cigarette proposed.

The Filtercigarette according to invention solves the first mentioned object by the fact that she makes a filter lining paper available to the mounting of a filter at a tobacco strand, which exhibits a lining paper strip and a Cigarettenpapierstreifen subsequent to it whereby the Cigarettenpapierstreifen forms the joint portion between tobacco strand and filter. Natural one can accordingly become each single filter of the Doppelfilter Cigarette according to invention designed. The use of such a special filter lining paper makes the handling of the Cigarette according to invention very many more practical by the consumers. Contrary to conventional embodiments here any longer the filter lining paper does not rise up beyond the filter on a part of the tobacco strand, but the part, thus the joint portion, overlapping with the tobacco strand, becomes from Cigarettenpapier formed. Thus only a Cigarettenpapierstreifen with the removal of the filter at the front edge of the tobacco strand, which does not disturb the taste impression with the Abrauchen, remains. Furthermore the filter at the portion, where the Cigarettenpapierstreifen attaches at the lining paper strips, can become clean severed, without a frayed Cigarettenende develops. A preferred configuration will come to the use, are provided with which no perforations or other separation assistance, since these would affect the taste as additional Ventilationsöffnungen to work and with it again.

Altogether it is however not to be excluded natural that also perforated or Cigaretten provided with Ventilationsöffnungen

becomes designed according to invention.

With a possible execution variant of the Filtercigarette according to invention the lining paper strip as well as the Cigarettenpapierstreifen is integrally formed, whereby the lining paper strip by printing on the physical characteristics become, in particular the strength of a lining paper strip imparted. Thus will a technical straightforward possibility provided to manufacture the filter lining paper with the two different zones since by partial printing of a single filter lining paper on in a section those characteristics provided to become to be able, which the lining paper strip must have, in particular which concerns its strength. The production becomes simplified, since lining paper strips and to it subsequent Cigarettenpapierstreifen in a separate work procedure connected with one another to become to have.

Natural one is however always also the possibility at the disposal to train and interconnect in accordance with an other embodiment of the Filtercigarette according to invention the lining paper strip and the Cigarettenpapierstreifen subsequent to it zweistückig to stick together in particular.

With an embodiment of the Filtercigarette according to invention the two filters exhibit a different structure. So for example filters with several connected in series chambers or coaxial filter arrangements can become used. Also dense or less dense packed filter materials can be used become.

On the other hand the desired effect can be obtained also thereby that the two filters become from different filter materials constructed, for example to Celluloseacetatoder paper filter and/or. Activated charcoal filters, and/or are provided with different filter ventilations.

By the use of various filters the for example subsequent combinations obtained leave themselves: vigorous/light taste, vigorous/ medium strong taste, medium strong/light taste.

Also the addition of additives (z. B. Activated carbon) into the filters is a conceivable path to obtain different filter effects and Geschmacksrichtungen. The latter can also by the addition of Flavours, (z. B. in the form of threads or capsules) in a filter or a different Flavour for both filters achieved become.

With a preferred embodiment of the Filtercigarette according to invention markings are mounted in the range of the filters, which mark the Cigarette resultant with separation of a filter. Preferably such markings are signatures, which become printed in the vicinity of the strand-lateral end of the filter. Preferred ones with the fact it is proceeded in such a way that with the separation of a filter also the corresponding marking and/or. the corresponding signature with severed becomes, so that a Cigarette remains, the which imprint on the remaining filter, corresponding in their taste, is designed.

The Cigarette has with both filters preferably a length from 80 to 120 mm, preferred 100 mm, whereby the length of the tobacco strand can amount to according to invention 40 to 60 mm and preferred with approximately 50 mm lies.

With a preferred Ausführungsform of the filter lining paper according to invention the Cigarettenpapierstreifen stands over a longitudinal edge of the lining paper strip and can become in this projecting portion the attachment of the tobacco strand used.

Preferred one becomes this lining paper by a double lining paper from a central strip Cigarettenpapier and two lateral set strips lining paper formed, which becomes separated in the center, so that two to each other mirror-image filter lining papers according to invention develop. Such "double" lining papers can be processed on modern machines.

An other aspect of the instant invention concerns the improved handling of Filtercigaretten according to invention by the consumers. Such Filtercigaretten with a Cigarettenschachtel can become used, the opening flaps at both front faces according to invention exhibits.

Here will it that consumers very simple made to manufacture the also actual desired Cigarette. If it takes out and holds the Cigarette at a filter there at an end of the Cigarettenschachtel, it must separate only the end of the Cigarette with the filter, coming out last, and receives always so in each case the desired type from Cigarette only by the fact that it takes it from a certain side out of the Cigarettenschachtel.

Particularly preferred becomes here a Cigarettenschachtel used, which exhibits opening flaps, which are hinged at opposite flat sides of the box at one stirnseit towards edge in each case. In this place respect taken becomes on the German patent specification DE 198 09 865 Cl of the applicant, is detailed described in which such a box.

In particular the embodiment in accordance with fig 1 of this patent specification specified above becomes received together with the corresponding explanation by reference herein.

If such a box used becomes and preferred still the opposite flat sides with identifications and/or. Labels are provided, which do not correspond in each case to that Cigaretten, which is more removable from the box from this flat side with the filter ahead, represent it for the consumers any problems, itself the simple desired Cigarette to flowing, where the filter at the tobacco strand remains to take out of the box and separate the opposite filter end.

And finally the invention points also a method to the fabrikatorischen, thus to masses out production of a Doppelfilter Cigarette with a tobacco strand and two filters with significant different filter effects, set at the tobacco strand, becomes attached with which at the two ends the prefabricated tobacco strand a filter in each case and by means of to the desired specification adapted of lining paper with the tobacco strand connected.

This method leaves itself on conventional Cigarettenherstellungs- und filter-sets machines to realize, which only few modified to become to have, so that is possible without large additional effort the fabrikatorische production of such Doppelfilter Cigaretten.

A so called "double lining paper" becomes from a central strip Cigarettenpapier and two strips lining paper used connected thereby at its longitudinal edge after a preferred embodiment. This double lining paper is driven out in particular by a separation measurer in two halves separate, which are to each other mirror-symmetric preferred, on the corresponding width and then to the attachment of the two filters at the central tobacco strand used.

When alternative is for this it also possible to operate a filter setting machine with two reel for a simple corresponding

lining paper although the for this required effort is larger.

The two lining paper strips of this double lining paper are so wide that they cover the single filters in each case, while the Cigarettenpapierstreifen must be so wide that a good bond is both to the lining papers and to the Cigarettenpapier tobacco of the strand possible.

The two lining papers can have different specifications, which are adapted regarding ventilation, thickness, width and color to the specifications of the used filters in particular.

However also all other lining papers used can become, whose structure is so designed that the part of the lining paper bonded with the tobacco strand is thin enough, in order to make the light separation possible of the filter from the tobacco strand to. This leaves itself, as already above indicated obtains for example by a Cigarettenpapier similar lining paper, which is in the range flowing/filter by printing amplified on. Printing on can take place in a strip (with a blank strip at the edge) or also in two strips (connected by a blank strip), so that lining papers in the described above geometries result. Also here different specifications on a "double lining paper" can be reached by printing on.

The invention becomes in the following more near explained on the basis reference bottom of embodiments on the accompanying, schematic designs. Show: Fig 1 a Doppelfilter Cigarette according to invention with different filter ten at both ends; Figs 2 and 3 Vorder-bzw. Back surface of a special Cigarettenschachtel to idiom with the Filtercigaretten according to invention; Fig 4 a filter lining paper according to invention with a lining paper strip and a Cigarettenpapierstreifen mounted to it; Fig 5 a schematic illustration of the method to the production of one sol Doppelfilter Cigarette chen; Fig 6 a double filter lining paper, as it with the method used who that can do; and fig 7 by isolating the double filter lining paper a developed filter lining paper.

In fig 1 is a Doppelfilter Cigarette according to invention shown. It consists of a tobacco strand 3, 2 attached to which on both sides one filter each is 1 and. The Doppelfilter Cigarette is altogether with 10 characterized. The two filters differ according to the present invention. So for example the filter is 1 so designed that with the Abrauben of the Cigarette with the filter 1, but without the filter 2, a vigorous Cigarette develops.

For this the natural filter must become 2 before severed. On the other hand one, if the filter 2 at the tobacco strand 3 remains and the filter 1 severed becomes, receives an easier Cigarette, by the different filter effects in the filters 1 and 2. With the represented embodiment thus the filter 2 has higher retention than the filter 1.

The filters 1 and 2 are on each side with a filter lining paper according to invention 11 at the tobacco strand 3 attached. Unrolled such a filter lining paper 11 in the fig 4 from the inside to see. It consists of a lining paper strip 9, is 6 so glued to which a Cigarettenpapierstreifen that he manages at a longitudinal side. At this Cigarettenpapierstreifen 8, and only in the range of this strip (thus not in the range of the lining paper strip 9), is the filter now with the tobacco strand 3 connected. This leads to the fact that with a separation of the filter only a part of the Cigarettenpapierstreifens 8 at the freed end of the Cigarette remains. With burning generated this remainder of the Cigarettenpapierstreifens 8 no disadvantageous taste impression. Furthermore from the separation in this place results a Cigarette, which did not fray at its anzubrennenden end smooth, thus.

On the Cigarettenpapierstreifen 8 in each case an imprint is applied, which indicates, which Cigarette develops, if one separates the opposite filter.

The figs 2 and 3 show a Cigarettenschachtel, how it becomes according to invention preferred with the described Doppelfilter Cigarette used. In fig 2 is the front side of these Cigarettenschachtel shown, while fig 3 shows their back surface. Beside the box in each case Cigaretten are in the layer shown, in which they are in the box. The front side of the box in fig 2 is provided with the reference numeral 5, and the lid, which opens from this side, carries the reference numeral 4. In fig 3 the back surface is 7 shown, and the other lid 6 of the box opens on this back surface 7. Those Box has thus at both front faces over a lid, which opens in each case on opposite flat sides.

This box allowed it after filling with Doppelfilter Cigaretten according to invention to offer to that consumers in a package two different Cigarettenversionen clearer more distinguishable and on responsive manner. By opening the lid 6 of the back surface 7, he receives the easier version of the Cigarette for the example; if it turns the package and opens the lid 4 of the front side 5, it receives the stronger version, whenever it separates the opposite filter. The box is naturally to the distinction of the two versions on Vorder- und back surface with the emblem of the respective version equipped. That consumer can deal thus on individual manner with its instantaneous taste needs, without having to lead two Cigarettenpackungen with itself.

Fig 5 points a schematic method to the fabrikatorischen production of such Doppelfilter Cigarette. A conventional Cigarettenherstellungsmaschine of 20 generated tobacco strands 22 with a length from 40 to 60 mm, in particular 50 mm, which are handed over to the relay drum 24 of a filter setting machine. The tobacco strands 22 become 24 so positioned thereby central on the relay drum that at the two ends of the tobacco strands 22 in each case a filter attached can become.

When and for the support of the tobacco strands 22 on the relay drum apertures 34 in the surface of the relay drum 24 serve marking, becomes applied to which a negative pressure, so that the tobacco strands become 22 to the surface of the relay drum 24 sucked and there held. To the other positioning 24 trough-shaped recesses are provided in the surface of the relay drum, which take up a single tobacco strand in each case.

From a first filter magazine 26 filters with a first filter effect and from a second filter magazine 30 are transferred filter 32 with second, to other filter effect to the relay drum 24 and from both sides at in the troughs the relay drum of 24 tobacco strands held 22 attached.

Of not represented reel a so called "double lining paper" 42 supplied, which is to be recognized 6 in the detail in fig, becomes. The double lining paper consists of a central strip 44 of Cigarettenpapier, which is 46, 48 connected at its two longitudinal edges with in each case a strip lining paper. Thus a lining paper of the embodiment widened around its mirror image acts after fig 4.

The two strips 46.48 lining paper are so wide with the fact that they cover the associated filter 28.32 in each case. The strip 44 Cigarettenpapier is so wide that a good bond is both to the two lateral lining papers 46.48 and 22 possible to the Cigarettenpapier of the tobacco strands.

If one proceeds for each bond with a lap from for instance 1 up to 8 mm, as she is in the Cigarettenindustrie conventional, then the strip should have 44 Cigarettenpapier a width from approximately 4 to 32 mm.

The two strips 46.48 lining paper are in their specifications, thus regarding ventilation, thickness, width, color etc. to the filter specifications of the two filters 28.32 adapted.

Beside this particularly suitable lining paper however also all other lining papers can become used, which are so constructed that the part of the lining paper bonded with the tobacco strand 22 is thin enough, in order to make the light separation possible of the filter from the tobacco strand to. This can be obtained for example by a Cigarettenpapier similar lining paper, which is in the range flowing/filter amplified.

The double lining paper 42 becomes by a separation measurer 50 in two to each other spiegelsym metrical halves from in each case a strip Cigarettenpapier 52.54 and the two strips 46.48 lining paper separate, on which 22 V-shaped separated and to a suction roll 38 with suction ports 40 hands corresponding width over of the tobacco strand, which fix the two strips. The two lining paper strips 46.52 and/or. 48,54 is beleimt on conventional manner and in lining paper leaflet cut. The sections are with 58 indicated.

Over a not-represented, in the Cigarettenindustrie conventional roll hand, which can become 28.32 separate adjusted for both filters if necessary, the filters become 28.32 22 connected with the tobacco strand. The two strips 46.48 lining paper cover the circumference of the filters 28.32, while at this strips the lining paper becomes 46.48 attached Cigarettenpapier 52.54 with the Cigarettenpapier of the tobacco strand 22 bonded.

The so manufactured Doppelfilter Cigaretten 56 is passed on over conventional Prüf-und delivery drums to a packaging machine.

When to the represented Ausführungsform of the manufacturing process know alternative in the filter setting machine also two reel with a simple lining paper, as it is in fig 4 shown, used become.



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### Claims

- Filtercigarette at a tobacco strand (3) and two at the tobacco strand set  
Filters (1, 2), which of the tobacco strand (3) are more releasable, whereby the two filters (1, 2) exhibit significant different filter effects, characterised in that those  
Filters (1, 2) by means of a filter lining paper (11) at the tobacco strand (3) mounted are, which exhibits a lining paper strip (9) and a Cigarettenpapier strip (8), subsequent to it, whereby the compound between tobacco strand (3) and filters (1, 2) over the Cigarettenpapierstreifen (8) made.
2. Filtercigarette according to claim 1, characterised in that of the lining paper strips (9) and the Cigarettenpapierstreifen (8), subsequent to it, integral are, whereby that  
Lining paper strips by printing the physical characteristics on, in particular the strength of a lining paper imparted become.
3. Filtercigarette according to claim 1, characterised in that of the lining paper strips and the Cigarettenpapierstreifen mehrstückig, in particular zweiseitig formed and connected with one another are, with one another bonded in particular are.
4. Filtercigarette after one of the claims 1 to 3, characterised in that with the filter (1, 2) a different structure exhibit.
5. Filtercigarette after one of the claims 1 to 4, characterised in that with the filter (1, 2) different filter materials exhibit.
6. Filtercigarette after one of the claims 1 to 5, characterised in that with the filter (1, 2) different high are ventilated.
7. Filtercigarette after one of the claims 1 to 6, characterised in that in the rich filter (1, 2) markings mounted are, which with separation the one  
Filter (1, 2) mark resultant Cigarette.
8. Filtercigarette after one of the claims 1 to 7, characterised in that Cigarette with both filters (1, 2) a length from 80 to 120 mm, preferred 100 mm exhibits, whereby the length of the tobacco strand (3) amounts to 40 to 60 mm, preferred about 50 mm.
9. Filtercigarette after one of the claims 1 to 8, characterised in that of the Cigarettenpapierstreifen (8) out-stood over a longitudinal edge of the lining paper strip (9).
10. Filter lining paper (11) for the mounting of a filter at a tobacco strand (3), characterised in that it a lining paper strip (9) and a Cigarettenpapier strip (8), attached to it, exhibits, whereby the Cigarettenpapierstreifen (8) is that dung-cut off between tobacco strand (3) and filter (1, 2) forms.
11. Filter lining paper (11) according to claim 10, characterised in that of the Cigarettenpapier strip (8) over a longitudinal edge of the lining paper strip (9) out-stands.
12. Filter lining paper after one of the claims 10 or 11, characterised in that it as "double lining paper" (42) from a central strip (44) Cigarettenpapier and two lateral set strips (46,48) lining paper formed is, in that  
Center separated becomes, so that two single filter lining papers bundenonen strip (52,54) entsteht out with one another Cigarettenpapier and strip (46,48) lining paper hen.
13. Filter lining paper according to claim 12, characterised in that after the Trennung resultant strip are to each other mirror-image.
14. Use of a Filtercigarette after one of the claims 1 to 9 with a Cigarettenpapier, which exhibits opening flaps (4,6) at both front faces.
15. Use according to claim 14, characterised in that the opening flaps (4, 6) in each case at opposite flat sides (5,7) of the box at a front  
Edge hinged are.
16. Use according to claim 14 or 15, characterised in that the opposite located flat sides (5,7) with identifications and/or. Labels are provided, which correspond in each case to that Cigaretten, which is more removable from the box by this flat side (5,7) with the filter (1,2) ahead ago.
17. Method to the production of a Doppelfilter Cigarette (56) with a tobacco strand (22) and two at the ends of the tobacco strand (22) set filters (28,32) with significant different filter effects, with at the two ends of the prefabricated TABakstrangs (22) in each case a filter (28,32) attached and by means of one to the desired  
Specifications of the filters (28,32) adapted lining paper (46,52/48,54) with that

Tobacco strand (22) connected becomes.

18. Process according to claim 17, with which tobacco strands (22) from approximately 40 to 60 become ~~their~~ length of a Cigarettenherstellungsmaschine (20) of the relay drum (24) of a Filteran typesetting machine supplied.

19. Process according to claim 18, characterised in that the tobacco strands (22) by suction ports (34) and/or trough-shaped recesses on the surface of the relay drum (24) positioned becomes.

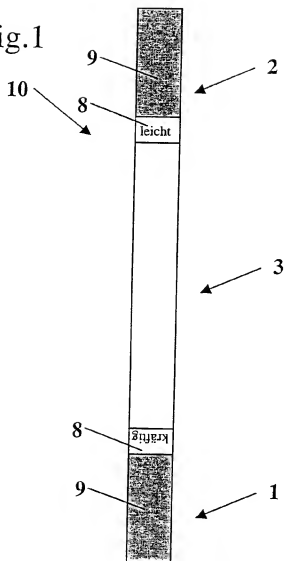
▲ top 20. Process according to one of claims 18 and 19, characterised in that to the two ends of the tobacco strands (of 22) filters (28,32), positioned on the relay drum (34), attached becomes, which become supplied of two filter magazines (26,30).

21. Process according to one of claims 17 to 20, characterised in that a "double lining paper" (42) from a central strip (44) Cigarettenpapier and two lateral strips (46,48) connected thereby, lining paper divided and the ~~entste henden~~ strips from Cigarettenpapier (52,54) and lining paper (46,48) the compound of the filters (28,32) with the tobacco watering gene (22) used become. 22. Process according to claim 21, characterised in that the double lining paper (42) in two to each other mirror-image strips from Cigarettenpapier (52,54) and lying paper (46,48) divided becomes.

23. Process according to one of claims 17 to 21, characterized thus that of lying papers (46,48) adapted regarding ventilation, thickness and width the specifications of the two filters (28,32) become.



Fig.1



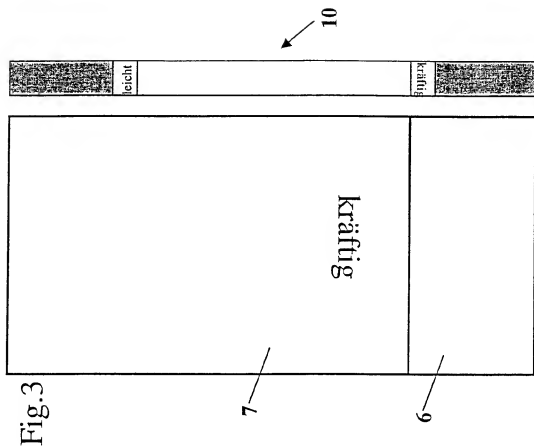
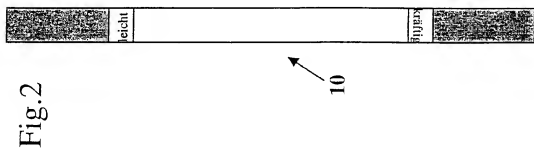
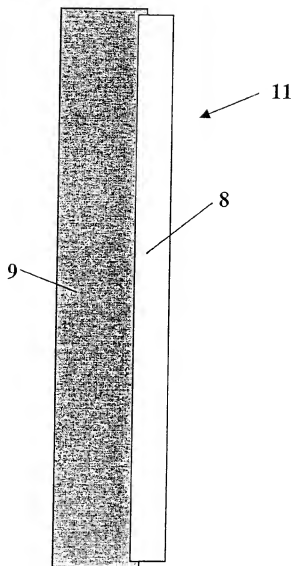


Fig.4



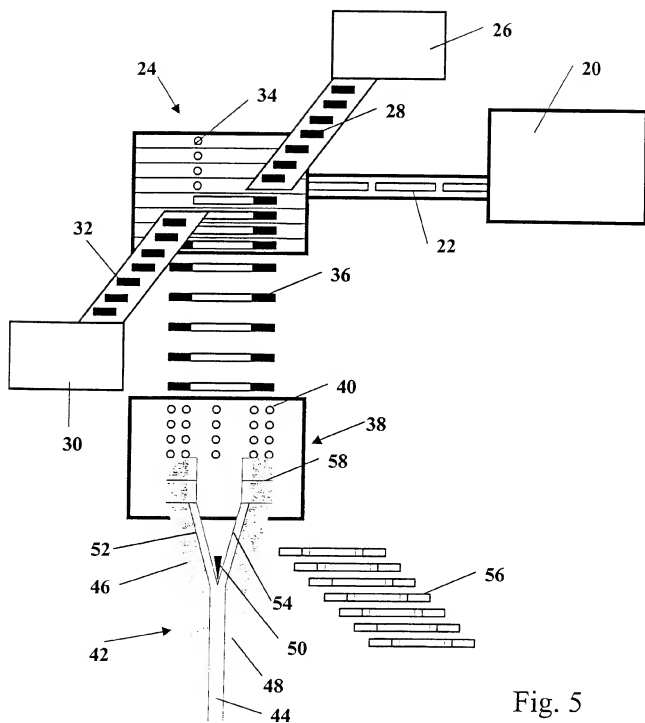


Fig. 5

Fig. 6

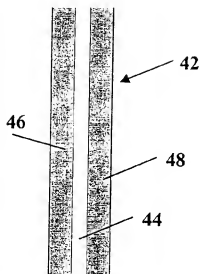


Fig. 7

